

SDN No. RD8-1078/40J

Page 3 of 4
Copy 9 of 14

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TASK 7. SERVICE AND SUPPORT

1. The two remaining Visicorders have been modified and are ready for shipment. An alarm circuit has been added to these units to indicate when the mercury-vapor light is not operating. The two buffer-amplifier units have been completed and have been checked with an AS-4 Terminal.

2. The AS-4A systems were installed and tested in the Washington area with the aid of two [] engineers. They assisted with the first week of tests which began 5 May. During the week of 12 May [] visited National Security Agency to exchange information on the [] which have caused so much trouble.

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3. The above-mentioned tests were supported at [] end by [] personnel operating the DT-4A Transmit Data Terminal, AT-4A Transmit RF Terminal, 231D-20 Transmitter, and supporting equipment at the [] test site. Assisting was [] as Government representative. The tests were still proceeding at the conclusion of this reporting period. Results have been good.

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TASK 8. AS-6 DATA TELEMETERING SYSTEM

1. Logical design of the data conversion digital circuits has been finalized. Design of individual logic elements such as flip-flops, buffers and inverters will begin early in the next reporting period.

2. Development of the AS-6 Field Unit transmitter and exciter is being undertaken by the RF Equipment Section of the [] [] This organization was responsible for the development of the RF translator unit incorporated in the AN/URC-15 and AN/ARC-68 airborne communication sets. It is believed that much of the development work conducted under that program will prove directly applicable to the AS-6 program.

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3. Proposals were received from [] for design and development of the Field Unit receiver front-end modules. [] technical proposal indicated the best design approach of the three, and their price was lowest. Accordingly a sub-contract is being negotiated with []

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4. Also for the Field Unit receivers, a transistorized tuned amplifier has been designed and is now being breadboarded. This amplifier will

25X1

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SDN NO. RD8-1078/40J

25X1

Page 4 of 4

Copy 9 of 14

be used to determine a set of general design parameters, which will be used for specific IF amplifier designs.

5. Development of the Receive (Data) Terminal is progressing. A preliminary design of the recognition drawer has been completed and a breadboard model is being constructed. This design is very similar to the one used in the Task 4 breadboard station except that additional time redundancy has been added to improve recognition reliability. Delay lines as used in the AS-4 and the AS-4A are being ordered.

GENERAL

1. [] visited on 23 April to discuss all Tasks of Contract RD-103.

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2. [] assisted in AS-4A testing from 5 to 15 May. [] were here from 7 May to repair the [] component for these tests.

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3. [] assisted in AS-4A testing at the Washington receiving site from 28 April to 9 May. [] also visited NSA the following week for indoctrination []

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4. [] visited Washington from 29 April to 5 May for intensive discussions on the AS-6 development, and for indoctrination on proposed new programs.

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5. Progress is satisfactory.

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Enclosures

1. Copies 1 through 10
Informal Progress Report, Contract RD-103

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SDN RD8-1062/403

Page 3 of 3

Copy 2 of 14

25X1

defective power supplies have been returned to the vendor and will be replaced by the redesigned version. Testing and calibration of the remaining Test Power Supplies have been completed.

TASK 7. SERVICE AND SUPPORT

1. The two remaining Visicorders have been delivered by [redacted] and are being modified for use with the AS-4 and AS-4A. An alarm circuit is being added to indicate when the mercury vapor lamp is not operating. The buffer units which drive the Visicorder are now under construction.

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2. Construction of the spare RS-16A receiver has been resumed.

TASK 8. AS-6 DATA TELEMETERING SYSTEM

1. Contractual coverage for development of the long-term programmer was given to [redacted] on 24 March.

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2. Proposals for design and development of transistorized receiver front-ends (for use in the AS-6 Field Unit) have been received from [redacted]

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[redacted] proposal indicated that they have the best approach to the development and the most reasonable price; unless unforeseen difficulties arise, they will be awarded a sub-contract for this work.

3. A thorough analysis of the transistorized crystal-controlled stepping oscillators is under way, with particular emphasis on the stability problem. Logical design of data conversion digital circuits has been started. Details of the battery discharge-recharge cycle are being investigated with several nickel-cadmium cell manufacturers.

GENERAL

1. [redacted] observed AS-6 evaluation tests from 26 to 28 March.

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2. [redacted] visited from 19 to 21 April to monitor progress on all RD-103 Tasks.

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3. Progress is satisfactory.

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SDN RD8-1027/40J

Page 3 of 4

Copy 9 of 14

25X1

TASK 6. RS-16A TEST POWER SUPPLY

Assembly and test of the first power supply has been completed. Assembly of two remaining supplies is well under way and should be completed during the next reporting period.

TASK 7. SERVICE AND SUPPORT

One modified Visicorder unit and its buffer amplifier were delivered to the Government on 21 March. Two more Visicorders have been ordered from [] they will be modified for use with either the AS-4 or AS-4A.

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TASK 8. DEVELOPMENT OF AS-6

1. This major Task was activated on 7 March. It covers development of the AS-6 Data Telemeter System and construction of one Field Unit and one Base Station. Thus it is the outgrowth of the AS-6 Study being conducted under Task 4. Effort to date has been aimed at organization of the effort, and toward making arrangements for supporting assistance, especially in the area of subcontracts.

2. []

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[] with a representative of Contractor's purchasing department to settle details on the long-term programmer sub-contract. Work on this project will begin early in the next reporting period. As a part of the same trip, an investigation of the [] as a possible sub-contractor on the transistorized interrogation receiver RF front end was made. A proposal was promised by [] by 15 April. Investigation of other possible subcontractors on this program will be made in the near future.

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GENERAL

1. [] visited on 28 February to observe security practices in connection with Contract RD-103.

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2. [] visited from 4 March through 7 March to assist with the [] units used with the AS-4A.

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SDN RD8-1027/40J

Page 4 of 4

Copy 9 of 14

25X1

3. On 7 March 
visited to observe progress on all phases of Contract RD-103.

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4. Progress is satisfactory.

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